

## **ECONOMIC DEVELOPMENT OF AMERICAN AND EUROPEAN AREAS IN 1951-99**

GUISAN, Maria-Carmen\*

AGUAYO, Eva

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### ***Abstract***

We present a comparison, at area level, of production by sector in America, Western Europe, Central Europe, East Mediterranean and East Europe, including also Russia and former USSR countries, and we analyse the main differences among these areas in economic development during the 20<sup>th</sup> century.

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### **1. Production by sector and per inhabitant in America and Europe**

This article on economic growth in large areas of America, Europe and Eurasia is complementary to another report on Africa and Asia-Pacific.

The aim of this report is to present a comparative analysis at area level of production by sector in America, Western Europe, Central Europe, East Mediterranean and East Europe. In the case of East Europe we include Russia and former USSR countries of Trans-Caucasian and Central Asia territories. In this paper we will sometimes refer to Europe as a whole which also includes the above mentioned countries of the former Soviet Union, as their history during the 20<sup>th</sup> century is clearly bound to Russia. In future analyses of the 21<sup>st</sup> century some of these countries will be included in Asia.

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\* Faculty of Economics. University of Santiago de Compostela, Spain, e-mail: eccgs@usc.es and eaguayo@usc.es

Other comparative analyses at area level regarding education, fertility, external trade and other features will appear in forthcoming issues of this journal.

More detailed analyses, at country level, are presented in reports devoted to America, in the current issue of *Applied Econometrics and International Development*, *AEID*, Vol.1-1, on Asia in the next issue Vol. 1-2, on Europe in the forthcoming issue Vol.2-1, and on Africa in Vol.2-2.

In this section we present a general view of production by sector in America and Europe in the period 1980-99, while in section 2 we analyse this evolution in large areas of America and in section 3 in large areas of Europe.

In sections 2 and 3 we also include an analysis of the evolution of total real Gross Domestic Product (GDP) and Population (Pop) at area level, and in section 4 we present the analysis of exponential rates of growth of real Gdp, Population and Gdp per inhabitant in several large areas of America and Europe, including also factors of increase for these variables.

Data for production, by sector and per inhabitant was calculated with our estimations based on the international statistics cited in the bibliography, especially World Bank, Maddison(2001) and Akal(2001), and was performed with data for 132 countries with more than one million people, which represents the majority of the population in each area.

On the other hand, total production and total population of each area were performed with data for the whole world (210 countries), including also countries and territories with less than one million people.

Table 1

Production per inhabitant in America and Europe:  
Agriculture and Industry (dollars at 1999 prices and PPPs)

Area	Ph80a	Ph90a	Ph99a	Ph80i	Ph90i	Ph99i
America	528	589	615	3207	3397	4369
Europe	535	551	568	4256	4837	4175
World	462	529	591	1732	1940	2285

Table 2

Production per inhabitant in America and Europe:  
Services and Total (dollars at 1999 prices and PPPs)

Area	Ph80s	Ph90s	Ph99s	Ph80t	Ph90t	Ph99t
America	9093	10291	11144	12827	14277	16127
Europe	6814	8322	8905	11605	13710	13648
World	3240	3721	4154	5434	6191	7031

In table 1 and 2 we see so much similarities between America and Europe as a whole, both with production by sector and per inhabitant higher than world average in all sectors. In the next section we will see the differences among large areas.

In 1999 the values of these variables were a little higher in America than in Europe, although the differences in Agriculture and Industry are small. The differences in Services are higher in all years, especially in 1999, a result which, in some degree is a consequence of problems of transition in some East European countries.

Tables 3 to 6 present real production by sector and total expressed in \$99, (billion US dollars at constant prices of 1999 and Purchasing Power Parities, PPPs), as well as the share of world production they represent in each sector, in percentages.

Table 3

Real production in Agriculture and World shares:

America and Europe

(Billion US\$ at 1999 prices and PPPs, and percentages)

	q80a	q90a	q99a	% 80	% 90	% 99
America	324.1	420.9	500.6	15.84	15.13	14.18
Europe	424.9	464.9	492.2	20.76	16.71	13.94
World	2046.7	2782.4	3531.0	100	100	100

Table 4

Real production in Industry and World shares:

America and Europe

(Billion US\$ at 1999 prices and PPPs, and percentages)

	q80i	q90i	q99i	% 80	% 90	% 99
America	1968.2	2429.0	3556.5	25.67	23.79	26.07
Europe	3382.3	4084.1	3614.9	44.11	40.00	26.50
World	7668.5	10210.7	13642.2	100	100	100

Table 5

Real production in Services and World shares:

America and Europe

(Billion US\$ at 1999 prices and PPPs, and percentages)

	q80s	q90s	q99s	% 80	% 90	% 99
America	5581.0	7357.8	9072.2	38.90	37.58	36.58
Europe	5416.1	7027.4	7711.0	37.75	35.89	31.09
World	14348.0	19579.1	24803.8	100	100	100

Table 6

Real Total Production and World shares: America and Europe  
(Billion \$ at 1999 prices and PPPs and percentages)

	q80t	q90t	q99t	% 80	% 90	% 99
America	7873.3	10207.8	13129.3	38.90	37.58	36.58
Europe	9223.3	11576.4	11818.0	37.75	35.89	31.09
World	24063.1	32572.2	41976.9	100	100	100

Real value of production in Agriculture increased a great deal in America, from a value of 324 in 1980 to nearly 501 in 1999, while in Europe there was greater stagnation with a moderate increase from nearly 425 in 1980 to 492 in 1999.

Real value of production in Industry also increased a great deal in America, from a value of 1968 in 1980, to 3556 in 1999. In Europe, however, there was less growth, from 3382 to 3615 in the period 1980-99, although a recovery is expected in economies in transition which will increase the total in following years.

Real value of production in Services experienced significant increases in the period 1980-99, from 7873 to 13129 in America and from 9223 to 11818 in Europe.

## **2.- Production by sector in large areas of America**

The areas considered in the case of America, according to criteria of population size, are the following:

### **1. USA and Canada**

2. Mexico and Central America: Besides Mexico this area includes: Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Trinidad and Tobago, and small Caribbean countries.

3. Andean America: Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela

4. Eastern South America: Argentina, Brazil, Paraguay and Uruguay

Table 7

Production per inhabitant in Agriculture and Industry: America

Area	Ph80a	Ph90a	Ph99a	Ph80i	Ph90i	Ph99i
USA and Canada	443	582	653	5180	6073	8300
Mexico and C. America	573	503	481	1692	1542	1797
Andean America	629	707	569	1353	1390	1661
Eastern South America	575	599	694	2203	2003	2435
Total America	528	589	615	3207	3397	4369
World	462	529	591	1732	1940	2285

Table 8

Production per inhabitant in Services and Total: America

Area	Ph80s	Ph90s	Ph99s	Ph80t	Ph90t	Ph99t
USA and Canada	16439	20360	22366	22062	27016	31319
Mexico and C. America	4451	4178	4439	6716	6223	6717
Andean America	3069	2880	3496	5052	4978	5726
Eastern S. America	4122	4308	5074	6901	6910	8203
Total America	9093	10291	11144	12827	14277	16127
World	3240	3721	4154	5434	6191	7031

Table 9

Gross Domestic Product and Population 1980-99: America  
(Billions \$ at 1999 prices and PPPs)

Area	Gdp80	Gdp90	Gdp99	Pop80	Pop90	Pop99
USA and Canada	5555.2	7480.7	9505.3	251.8	276.9	303.5
Mexico and C. America	803.2	896.1	1141.9	119.6	144.0	170.0
Andean America	430.9	517.7	720.9	85.3	104.0	125.9
Eastern S. America	1084.2	1313.6	1761.2	157.1	190.1	214.7
Total America	7873.5	10208.1	13130.3	613.8	715.0	814.1

In America we observe that the more economically advanced countries, the USA and Canada, have the highest levels of all World areas in production per inhabitant, with industrial production and services very much higher than World average, but the other areas have much lower values, compared with World average.

The period 1980-90 was a lost decade for the development of Latin American countries in terms of production per inhabitant, as stagnation clearly occurred in all the areas of these countries. But the period 1990-99 was much better, especially in Eastern South America where the increase of real Gdp was very high, 34% in total and 18% per inhabitant.

In the period 1980-99 the USA and Canada multiplied their value of real Gdp by 1.71, number of inhabitants by 1.21 and, as the result of dividing both factors, production per inhabitant by 1.41.

The area of Mexico and Central America multiplied its value of real Gdp by a factor of 1.42, while the Population number also multiplied by 1.42 and the result of dividing both multipliers gives a factor of 1 for the variable production per inhabitant. In comparison with the USA and Canada we observe that Mexico and Central America had a lower factor of increase in real Gdp and a higher factor of Population increase and both circumstances explains why this area could not reach a factor as high as the USA and Canada for production per inhabitant.

Efficient policies are required to achieve higher results of increase in production per inhabitant in the following decades. The results for Mexico are generally better than those for the majority of the countries of this area, as we can see in Guisan and Aguayo(2001).

The area of Andean America had a very good result for the whole of the period 1980-99, multiplying its real Gdp by a factor of 1.67, but the great increase in Population, multiplied by a factor of 1.48 gives, as result of the quotient between those factors, a rather disappointing factor of only 1.13 for the real value of production per inhabitant.

The area of Eastern South America had a multiplication factor of 1.62 for real Gdp, a multiplication factor of 1.37 for population, and therefore a factor of 1.18 for the real value of production per inhabitant.

With rates of population growth similar to that of the USA and Canada the other areas could have increased the real value of production per inhabitant by higher factors: 1.17, instead of 1, in the area of Mexico and Central America; 1.38, instead of 1.13, in the case of Andean America, and 1.34, instead of 1.18 in the case of Eastern South America. Moderation of fertility rates is of course an important step towards the increase of income per inhabitant in Latin America, but there are also many other policies that should be improved in order to achieve high factors of increase in real Gdp similar to those of Asia, which, as whole, reached a factor of 2.70 for real Gdp in 1980-99.



### **3.- Production by sector in large areas of Europe**

The countries included in the areas of Europe include also Russia and some Central Asia countries which were politically bound to Russia in the ex-Ussr during the 20<sup>th</sup> century.

The large areas, and countries with more than one million people, included in this section are:

1. Nordic and British Europe: Denmark, Finland, Ireland, Norway, Sweden and United Kingdom

2. Germanic Europe and Benelux: Austria, Belgium, Germany, Netherlands and Switzerland

3. Latin Europe: France, Italy, Portugal and Spain

4. Central Europe and East Mediterranean: Albania, Bulgaria, Croatia, Czech Republic, Greece, Hungary, Macedonia, Poland, Romania, Slovak, Slovenia, Turkey

21. Russia and ex-Ussr This area includes besides Russia, some Eastern European, Trans-Caucasian and Central Asian countries: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldavia, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

Table 10

Production per inhabitant in Agriculture and Industry: Europe  
(dollars at 1999 prices and PPPs)

Area	Ph80a	Ph90a	Ph99a	Ph80i	Ph90i	Ph99i
Nordic and British Europe	300	344	353	4456	5909	6849
Germanic Europe and Benelux	272	325	360	6383	7220	7298
Latin Europe	521	555	561	4966	5787	6256
Central Europe and East Med.	802	761	808	2129	2457	2647
Russia and ex-Ussr	557	560	563	4219	4599	1899
Total Europe	535	551	568	4256	4837	4175
World	462	529	591	1732	1940	2285

Table 11

Production per inhabitant in Services and Total: Europe

Area	Ph80s	Ph90s	Ph99s	Ph80t	Ph90t	Ph99t
17. Nordic and British Europe	9549	12545	15475	14306	18798	22677
18. Germanic Europe and Benelux	11732	14965	17065	18387	22509	24723
19. Latin Europe	9655	12540	14315	15142	18883	21132
20. Central Europe and East Med.	3246	3883	4917	6176	7100	8372
21. Russia and ex-Ussr	4442	4890	3098	9219	10048	5501
Total Europe	6814	8322	8905	11605	13710	13648
World	3240	3721	4154	5434	6191	7031

Table 12

Gross Domestic Product and Population 1980-99: Europe  
(Billions US\$ at 1999 prices and PPPs)

Area	Gdp80	Gdp90	Gdp99	Pop80	Pop90	Pop99
17. Nordic and British Europe.	1177.4	1581.8	1972.9	82.3	84.2	87.0
18. Germanic Europe and Benelux	2143.9	2680.8	3058.2	116.6	119.1	123.7
19. Latin Europe	2386.4	3083.6	3512.1	157.6	163.3	166.2
20. Central Europe and East Med.	1065.4	1378.1	1655.2	172.5	194.1	197.7
21. Russia and ex-Ussr	2450.4	2850.6	1602.4	265.8	283.7	291.3
Total Europe	9223.5	11575.9	11800.8	794.8	844.4	865.9

First of all we can observe that the three Western Europe areas: Nordic and British Europe, Germanic Europe & Benelux, and Latin Europe in 1999 reached very high levels of total production per inhabitant, with values higher than 21000 dollars, approximately three times the World average.

The other areas had much lower levels. Central Europe and East Mediterranean showed a positive evolution in this variable going from a value of 6176 in 1980 to a value of 8372 in 1999, but in the case of Russia and ex-Ussr the evolution in the period 1990-99 was very problematic and the estimated levels of production in 1999 fell much lower than their values for 1980. A more detailed study of Russia and former Ussr countries would be of great interest to evaluate the problems that affect the population, and perhaps they will show that the decrease in terms of consumer income is less acute as it appears from general figures, as some reductions of production could be more related with military industry than with private goods and services consumption.

In the Nordic and British area of Western Europe real Gdp in the period 1980-99 multiplied by a factor of 1.68. In the Germanic and Benelux area it multiplied by a factor of 1.43, and in the Latin area by 1.48, 1.50 being the factor of real Gdp for the set of Western Europe, which evolved from 5707 Billion dollars at constant prices in 1980 to 8544 in 1999. The corresponding factors for Population were very moderate, with a value of 1.06 in the first and second cases, 1.05 in the third, and a value near to 1.06 for the set of

Western Europe. The corresponding quotients give the values of the factors of real production per inhabitant which are equal to 1.58 for Nordic and British, 1.35 for Germanic and Benelux, 1.41 for Latin Europe and 1.42 for the set of the three Western Europe areas.

In Central Europe and East Mediterranean real Gdp in the period 1980-99 multiplied by a factor of 1.55, which is slightly higher than that corresponding to the set of Western Europe, but Population multiplied by a higher factor of 1.15, and the factor of total production per inhabitant was 1.35, a little lower than that corresponding to Western Europe.

In Russia and former Ussr area, production dropped in the period 1990-99 and that implies a factor for real Gdp less than unity, of 0.65 in the period 1980-99. The factor of Population was moderate although less moderate than in Western Europe, with a value of 1.10. The quotient between these two factors is 0.60 which is the factor corresponding to total production per inhabitant at constant prices.

At the end of the 20<sup>th</sup> century and at the beginning of the 21<sup>th</sup> century Western Europe faces the great pressure of immigration movements from other European areas and from outside Europe, especially from African countries, because of the great differences in income per inhabitant, which have increased over the last decades, and because of the low levels of hope for improvement in economic development in the countries of origin of many of the migration population.

Western European society has developed some important values of international cooperation and social solidarity with underdeveloped countries that should be improved. The right method is to help with efficient policies for fostering the economic development of the countries of origin of the population. Policies of European authorities are, in the opinion of many socio-economic researchers, clearly below the expectations that both European society and the population of underdeveloped countries maintain.

It is of great importance for the future of international cooperation to open the closed doors of many European institutional bureaucracies and to improve the debate on these policies on European Televisions and Newspapers. Socio-economic researchers with knowledge and ideas for efficient policies of international cooperation for development should be heard both by public opinion and politicians to a much greater extent than before.

Western European cooperation should be particularly addressed to the aid of other countries of Europe and Central Asia, Africa and Latin American and Caribbean countries, and it should of course collaborate positively with other countries of the World, to foster a new international view of international cooperation which is more positive and efficient, based in the great importance of education and human values.

#### **4.- Rates of growth of real Gdp and Population in America and Europe in the 20<sup>th</sup> century**

In table 13 we see that although there has been important increases in population in America and Europe, their shares in total World population has declined, together representing nearly 32% in 1980 and only 28% in 1999.

Table 13

Evolution of Population in 1980-99 by continent and World shares (millions of people and percentages)

	Pop80	Pop90	Pop99	%80	%90	%99
America	613.8	715.0	814.1	13.86	13.59	13.64
Europe	794.8	844.4	865.9	17.95	16.05	14.50
World	4428.6	5262.0	5970.6	100	100	100

In tables 14 to 19 we can see differences between areas in terms of rates of growth of real Gdp, Population and Gdp per inhabitant.

We would like to highlight that many problems of Latin American countries are due more to excessive increase in Population than to insufficient increase in real Gdp. It is important for Latin America to begin and sustain development in order to increase real Gdp rates of growth, and to moderate, in the majority of countries, the excessive rates of population growth. This moderation will be reached if the educative level of the population improves as can be seen in the cross-countries models of Guisan, Aguayo and Exposito(2001).

Table 14

Rates of growth of Production (Q), Population (Pop) and Production per inhabitant (Ph)

(exponential rates of average yearly growth in percentage)

Area	Q80-90	Q90-99	Pop80-90	Pop90-99	Ph80-90	Ph90-99
USA+Canada	2.98	2.66	0.95	1.02	2.03	1.64
Latin America	1.63	3.16	1.91	1.70	-0.28	1.46
Western Europe	2.53	1.68	0.28	0.31	2.25	1.37
Central Europe+East Med.	2.57	2.03	1.18	0.20	1.39	1.83
Russia and ex-Ussr	1.52	-6.28	0.65	0.29	0.87	-6.57
AMERICA	2.60	2.80	1.53	1.44	1.07	1.36
EUROPE	2.27	0.23	0.61	0.28	1.66	-0.05
WORLD	3.03	2.82	1.72	1.40	1.31	1.42

Table 15

Factors of increase of Production (Q), Population (Pop) and Production per inhabitant (Ph)

	Q80-90	Q90-99	Pop80-90	Pop90-99	Ph80-90	Ph90-99
USA+Canada	1.35	1.27	1.10	1.10	1.22	1.16
Latin America	1.18	1.33	1.21	1.17	0.97	1.14
Western Europe	1.29	1.16	1.03	1.03	1.25	1.13
Central Europe+East Med.	1.29	1.20	1.13	1.02	1.15	1.18
Russia and ex-Ussr	1.16	0.57	1.07	1.03	1.09	0.55
AMERICA	1.30	1.29	1.16	1.14	1.11	1.13
EUROPE	1.26	1.02	1.06	1.03	1.18	1.00
WORLD	1.35	1.29	1.19	1.13	1.14	1.14

Table 16

Exponential rates of yearly growth, in percentage, 1913-98: Gdp

Area	1913-50	1950-73	1973-98	1950-98	1913-98
USA and Canada <sup>1</sup>	2.77	3.95	2.94	3.42	3.14
Latin America	3.37	5.19	2.98	4.04	3.75
Western Europe	1.18	4.70	2.09	3.34	2.40
Eastern Europe + exUssr	1.82	4.73	-0.56	1.97	1.91
World	1.83	4.79	2.97	3.84	2.97

Source: Own calculation based on figures by Maddison(2001).<sup>1</sup> The group of USA and Canada includes also Australia and Canada in the figures by this author.

Table 17

Exponential rates of yearly growth, in percentage, 1913-1998:  
Population

Area	1913-50	1950-73	1973-98	1950-98	1913-98
USA + Canada <sup>1</sup>	1.24	1.54	1.01	1.26	1.25
Latin America	1.95	2.69	1.99	2.33	2.16
Western Europe	0.42	0.70	0.32	0.50	0.47
Eastern Europe + exUssr	0.34	1.30	0.54	0.90	0.66
World	0.93	1.90	1.65	1.77	1.40

Source: Own calculation based on figures by Maddison(2001).<sup>1</sup> The group of USA and Canada includes also Australia and Canada in the figures by this author



Table 18

Exponential rates of yearly growth, in percentage, 1913-1998: Gdph

Area	1913-50	1950-73	1973-98	1950-98	1913-98
USA + Canada <sup>1</sup>	1.53	2.41	1.93	2.16	1.89
Latin America	1.42	2.50	0.99	1.71	1.59
Western Europe	0.76	4.00	1.77	2.84	1.93
Eastern Europe + exUssr	1.48	3.43	-1.10	1.07	1.25
World	0.90	2.89	1.32	2.07	1.56

Note: Gdph=Gdp/Pop, and thus Exp.rate Gdph= Exp. rate Gdp - Exp. rate Pop.

Table 19

Exponential Rates of yearly growth of real Gdp, Pop, and Gdph (percentage of yearly increase in 1950-98)

Area	Rate Gdp	Rate Pop	Rate Gdph
USA + Canada <sup>1</sup>	3.42	1.26	2.16
Latin America	4.04	2.33	1.71
Western Europe	3.34	0.50	2.84
Eastern Europe + exUssr	1.97	0.90	1.07
World	3.84	1.77	2.07

Table 20

Factors of increase of Gdp, Pop and Gdph in 1950-98

Area	F(Gdp)	F(Pop)	F(Gdph)
USA + Canada <sup>1</sup>	5.16	1.83	2.82
Latin America	6.95	3.06	2.27
Western Europe	4.97	1.27	3.91
Eastern Europe + exUssr	2.57	1.54	1.67
World	6.32	2.34	2.70

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